

DVS 204

Four Input Digital Video Scaler



DVS 204D

DESCRIPTION

Extron **DVS 204** scalars incorporate the latest in high performance and proprietary scaling technology with the input flexibility essential for today's top-notch audio/video applications—including an optional Serial Digital Interface (SDI) input. With 36 selectable output rates, including a variety of HDTV rates, the DVS 204 is the perfect scaling solution for A/V environments such as boardrooms, conference rooms, and home theaters, as well as rental and staging applications. Models with 12V external power supplies are ideal for yachts, planes, or other environments using a 12V power source.

There are four models in the DVS 204 line—**DVS 204**, **DVS 204D**, **DVS 204 12V**, and **DVS 204D 12V**. Each model supports the following video formats on one of four inputs: RGB pass-through, component, S-video, and composite video. Input 4 also accepts RGB computer-video as a pass-through signal. The “D” (digital) versions also support SDI signals. For all models, RGB or component video is output simultaneously on one female 15-pin HD connector and six female BNCs.

To enable superior scaling performance, the DVS 204 features several Extron proprietary technologies: Dynamic Motion Interpolation (DMI™), 3:2 and 2:2 pulldown detection (patent pending), True Rate, and patented Accu-RATE Frame Lock (AFL™). Key features include aspect ratio control to accommodate different movie formats, three aspect ratio presets per input, and vertical blanking adjustments.

The DVS 204 can be controlled using the front panel or through the RS-232 serial port. Each model can also be controlled remotely through the optional IR 901 remote. The front panel buttons control video input selection and picture adjustments. All functions are available through RS-232 using Extron's user-friendly Simple Instruction Set (SIS™).

FEATURES

- **Input and Pass-through connectors** — Input one accepts composite video on one female BNC; input two accepts composite, S-video, or component on three females BNCs; input three accepts S-video on a 4-pin mini DIN; input four accepts an RGB computer-video pass-through or 15 kHz RGBS, or RGBcvS signals on a female 15-pin HD connector. The optional SDI card can be configured for any of the four inputs.
- **3:2 (NTSC) and 2:2 (PAL) pulldown detection** — Advanced film mode processing techniques help maximize image detail and sharpness for NTSC or PAL sources that originated from film (patent pending).
- **True-Rate** — Recovers the natural motion dynamics of material that originated from film.
- **Dynamic Motion Interpolation (DMI)** — DMI technology is an advanced motion detection and compensation method used to deliver the best aspects

of still and motion algorithms. This process results in a superior level of image enhancement capability with no loss of image fidelity.

- **Accu-RATE Frame Lock (AFL)** — A patented technology exclusive to Extron that solves frame rate conversion issues experienced by video scalars. When video input and output refresh rates differ, there are certain points in time when the two rates cross over each other. The result is a glitch or image freeze on the display. AFL solves this problem by locking the output frame rate to the input frame rate.
- **Scaled output resolutions** — The DVS 204 provides 36 user-selectable computer-video output rates, up to 1400 x 1050 and including 480p, 720p, 1080p, and 1080i.
- **Aspect ratio conversion** — Ability to horizontally and vertically size any video input to meet a specific aspect ratio. Three memory presets for aspect ratio are available for each input by pushing each input button repeatedly.
- **Quad-standard video decoding compatibility** — The DVS 204 uses a digital, four-line adaptive comb filter to decode NTSC 3.58, NTSC 4.43, PAL, and SECAM for integration in systems worldwide.
- **SDI input card** — An optional Serial Digital Interface (SDI) input is available.
- **Picture controls** — Brightness, contrast, color, tint, horizontal and vertical sizing, and horizontal and vertical centering are provided.
- **Vertical blanking** — Variable top and bottom vertical blanking eliminates edge noise caused by tapehead switching and captioning.
- **Front panel security lockout** — This feature locks out all front panel functions except for input selection; all functions, however, remain active through RS-232 control.
- **RS-232 control** — A rear panel, RS-232 control port provides connection of the DVS 204 to a third-party control system.
- **Display compatibility** — The DVS 204 scalars are compatible with display devices such as VGA/SVGA monitors, HDTV, LCD, DLP™, D-ILA®/LCoS, or plasma.
- **Simple Instruction Set (SIS)** — Extron SIS is a set of basic ASCII code commands that provides simple control through a third-party control system. Instead of programming in long, obscure strings of code, SIS makes it easy to operate an Extron product using RS-232 control.
- **Rack-mountable** — The DVS 204 is housed in a 1U, half rack width metal enclosure.
- **Power supply** — The DVS 204 is available in versions suitable for fixed or mobile applications. The DVS 204 and DVS 204 D are equipped with an internal, autoswitching power supply for worldwide compatibility. For marine and other mobile applications, a 12 VDC, 3A power supply is supplied with the DVS 204 12V and DVS 204 D 12V.

MODEL	PART #
DVS 204	60-442-01
DVS 204 D (with SDI input)	60-442-02
DVS 204 12V	
(12V external power supply)	60-442-11
DVS 204 D 12V (with SDI input and 12V external power supply)	60-442-12

OPTIONAL ACCESSORIES

SDI input card	70-168-01 (page 427)
IR 901 remote control	70-152-01 (page 427)
Under Desk mounting kit	70-219-01 (page 550)
1U Rack Shelf	60-190-01 (page 553)



DVS 204 (continued)...

SPECIFICATIONS

VIDEO INPUT

Number/signal type	1 (RGBHV, RGBS, RGsB) pass-through, RGBS, RGBcvs 1 composite video, S-video, component video (Y, R-Y, B-Y) 1 S-video, 1 SDI (optional, DVS 204D only) 1 composite video
Connectors	(1) 15-pin HD female — RGB pass-through, RGBS, RGBcvs 3 BNC female — component video, S-video, composite video 1 BNC female — SDI (DVS 204D, DVS 204D 12V only) (1) 4-pin mini DIN female — S-video 1 BNC female — composite video
Nominal level.....	1 Vp-p for Y of component video and S-video, and for composite video 0.7 Vp-p for RGB and for R-Y and B-Y of component video 0.3 Vp-p for C of S-video
Minimum/maximum levels	Analog: 0.0V to 1.0 Vp-p with no offset
Impedance	75 ohms
Horizontal frequency	NTSC 3.58, NTSC 4.43, PAL, SECAM
Vertical frequency	NTSC 3.58, NTSC 4.43, PAL, SECAM
Resolution range	NTSC 3.58, NTSC 4.43, PAL, SECAM
Return loss	<-30 dB @ 5 MHz
DC offset (max. allowable).....	1.5V

VIDEO PROCESSING

Decoder.....	9 bit digital
Digital sampling.....	24 bit, 8 bits per color; 13.5 MHz standard
Colors	16.78 million

VIDEO OUTPUT

Number/signal type	1 scaled or pass-through RGBHV, RGBS, RGsB; or scaled component video (Y, R-Y, B-Y)
Connectors	6 female BNC 1 female 15-pin HD
Nominal level.....	1 Vp-p for Y of component video 0.7 Vp-p for RGB and for R-Y and B-Y of component video
Minimum/maximum levels	0.0V to 0.7 Vp-p
Impedance	75 ohms
Scaled resolutions	640x480 ^{1,3,4,5,6} , 800x600 ^{1,3,4,5,6} , 848x480 ^{1,3,4,5,6} , 852x480 ^{1,3,4,5,6} , 1024x768 ^{1,3,4,5,6} , 1280x768 ^{2,3,5,6} , 1280x1024 ^{1,3,4,5} , 1360x765 ^{1,3,4,5,6} , 1365x1024 ^{1,3,4,5} , 1400x1050 ^{1,3,5} , HDTV 480p ^{3,5} , 720p ^{3,5} , 1080p ^{3,5} , and 1080i ^{3,5} ¹ = at 50 Hz, ² = at 56 Hz, ³ = at 60 Hz, ⁴ = at 75 Hz, ⁵ = locked to the current input's vertical refresh rate, ⁶ = True Rate

SYNC

Input type	R(RGBHV, RGBS, RGsB) pass-through, RGBS, RGBcvs
Output type	RGBHV, RGBS, RGsB
Standards	NTSC 3.58, NTSC 4.43, PAL, SECAM
Input level	0V to 1.0 Vp-p
Output level	TTL: 5.0 Vp-p, unterminated
Input impedance	75 ohms
Output impedance	75 ohms
Max input voltage	5 Vp-p
Max. propagation delay	20 ns
Polarity	Positive or negative (switch-selectable)

CONTROL/REMOTE

Serial control port	RS-232, 9-pin female D connector
Contact closure	9-pin female D connector (same as RS-232 connector)
IR remote control	Extron IR 901 (optional)
Program control	Extron's control program for Windows® Extron's Simple Instruction Set™ — SIS™

GENERAL

Power	
DVS 204, DVS 204D	100 VAC to 240 VAC, 50/60 Hz, 30 watts, internal, autoswitchable
DVS 204/204D 12 VDC.....	100 VAC to 240 VAC, 50/60 Hz, 36 watts, external, autoswitchable; to 12 VDC, 3 A power supply. Product requires 2 A.
Rack mount	Yes, with optional rack shelf, part #60-190-01
Enclosure type	Metal
Enclosure dimensions	1.75" H x 8.75" W x 9.5" D (1U high, half rack width) 4.4 cm H x 22.2 cm W x 24.1 cm D (Depth excludes connectors and knobs. Width excludes rack ears.)
Product weight	3.3 lbs (1.5 kg)
Shipping weight	6 lbs (2.7 kg)
Listings/Compliances	UL, CUL, CE, FCC Class A, VCCI, AS/NZS, ICES
Warranty	3 years parts and labor

APPLICATION

